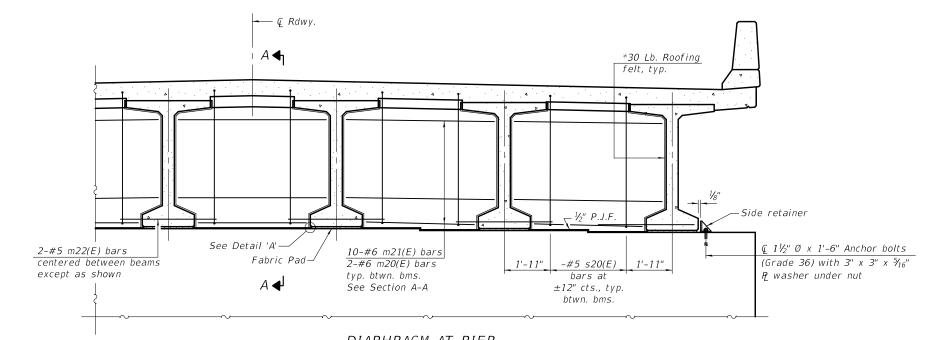
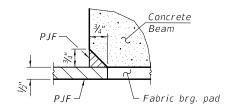
CELL / MODEL NAME	DESCRIPTION	DATE
DFP-BT6372-0	Diaphragm Fixed Pier; Bulb T-Beam 63-72 inch beam depth; No skew	2/17/2017
DFP-BT6372-L	Diaphragm Fixed Pier: Bulb T-Beam 63-72 inch beam depth; Left skew	2/17/2017
DFP-BT6372-R	Diaphragm Fixed Pier: Bulb T-Beam 63-72 inch beam depth; Right skew	2/17/2017
DFP-I3642-0	Diaphragm fixed pier; I-Beam 36-42 inch beam depth; No skew	2/17/2017
DFP-l3642-L	Diaphragm fixed pier; I-Beam 36-42 inch beam depth; Left skew	2/17/2017
DFP-I3642-R	Diaphragm fixed pier; I-Beam 36-42 inch beam depth; Right skew	2/17/2017
DFP-I4854-0	Diaphragm fixed pier; I-Beam 48-54 inch beam depth; No skew	2/17/2017
DFP-I4854-L	Diaphragm fixed pier; I-Beam 48-54 inch beam depth: Left skew	2/17/2017
DFP-I4854-R	Diaphragm fixed pier; I-Beam 48-54 inch beam depth; Right skew	2/17/2017
DFP-IL27-0	Diaphragm fixed pier; IL 27 inch beam depth; No skew	2/17/2017
DFP-IL27-L	Diaphragm fixed pier; IL 27 inch beam depth; Left skew	2/17/2017
DFP-IL27-R	Diaphragm fixed pier; IL 27 inch beam depth; Right skew	2/17/2017
DFP-IL36-0	Diaphragm fixed pier; IL 36 inch beam depth; No skew	2/17/2017
DFP-IL36-L	Diaphragm fixed pier; IL 36 inch beam depth; Left skew	2/17/2017
DFP-IL36-R	Diaphragm fixed pier; IL 36 inch beam depth; Right skew	2/17/2017
DFP-IL36N-0	Diaphragm fixed pier; IL 36 inch beam depth narrow top; No skew	2/17/2017
DFP-IL36N-L	Diaphragm fixed pier; IL 36 inch beam depth narrow top; Left skew	2/17/2017
DFP-IL36N-R	Diaphragm fixed pier; IL 36 inch beam depth narrow top; Right skew	2/17/2017
DFP-IL4554-0	Diaphragm fixed pier; IL 45-54 inch beam depth; No skew	2/17/2017
DFP-IL4554-L	Diaphragm fixed pier; IL 45-54 inch beam depth; Left skew	2/17/2017
DFP-IL4554-R	Diaphragm fixed pier; IL 45-54 inch beam depth; Right skew	2/17/2017
DFP-IL4554N-0	Diaphragm fixed pier; IL 45-54 inch beam depth narrow top; No skew	2/17/2017
DFP-IL4554N-L	Diaphragm fixed pier; IL 45-54 inch beam depth narrow top; Left skew	2/17/2017
DFP-IL4554N-R	Diaphragm fixed pier; IL 45-54 inch beam depth narrow top; Right skew	2/17/2017
DFP-IL6372-0	Diaphragm fixed pier; IL 63-72 inch beam depth; No skew	2/17/2017
DFP-IL6372-L	Diaphragm fixed pier; IL 63-72 inch beam depth; Left skew	2/17/2017
DFP-IL6372-R	Diaphragm fixed pier; IL 63-72 inch beam depth; Right skew	2/17/2017
DFP-IL6372N-0	Diaphragm fixed pier; IL 63-72 inch beam depth narrow top; No skew	2/17/2017
DFP-IL6372N-L	Diaphragm fixed pier; IL 63-72 inch beam depth narrow top; Left skew	2/17/2017
DFP-IL6372N-R	Diaphragm fixed pier; IL 63-72 inch beam depth narrow top; Right skew	2/17/2017

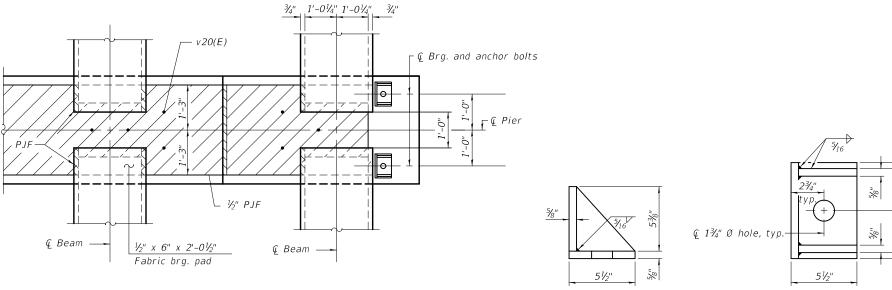


<u>DIAPHRAGM AT PIER</u>

\*Bonded to sides of beams embedded into diaphragm.



### DETAIL 'A'



### PLAN AT PIER

(Showing bearing pads and PJF details)

#### SIDE RETAINER

(2 required each side of pier).
Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.

### Notes:

SECTION A-A

m22(E)

v20(E)-

← & Pier 1'-3"

Reinforcement bars in diaphragm are billed with superstructure on sheet  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

Concrete in diaphragm is included with Concrete Superstructure on sheet  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

-s20(E)<sup>°</sup>

m21(E);

G6 7

– m20(E)

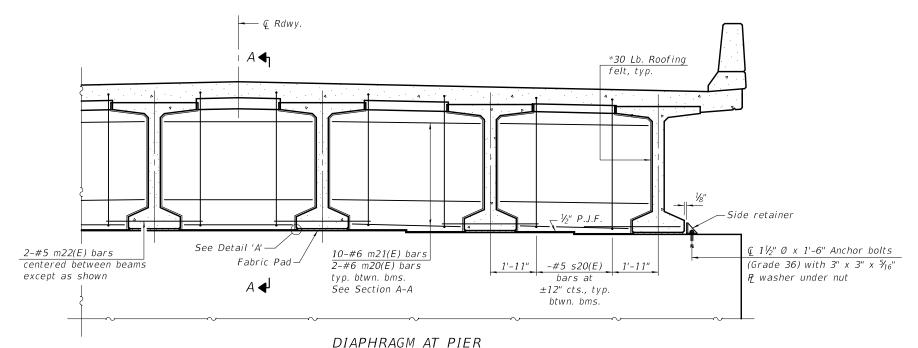
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

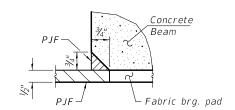
DFP-BT6372-0

2-17-2017

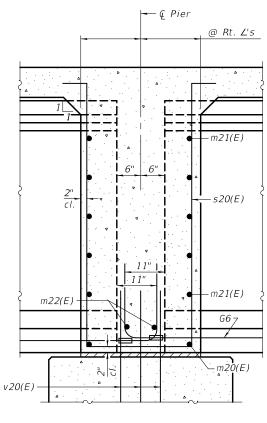
FILE NAME =	USER NAME =	DESIGNED -	REVISED -		DIAPHRAGM DETAILS	F.A. RTF.	SECTION	COUNTY	TOTAL	SHEET NO.
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	PLOT SCALE =	DRAWN -	REVISED -	DEPARTMENT OF TRANSPORTATION	STRUCTURE NO.			CONTRACT	NO.	
	PLOT DATE =	CHECKED -	REVISED -				ILLINOIS FED.	AID PROJECT		



\*Bonded to sides of beams embedded into diaphragm.

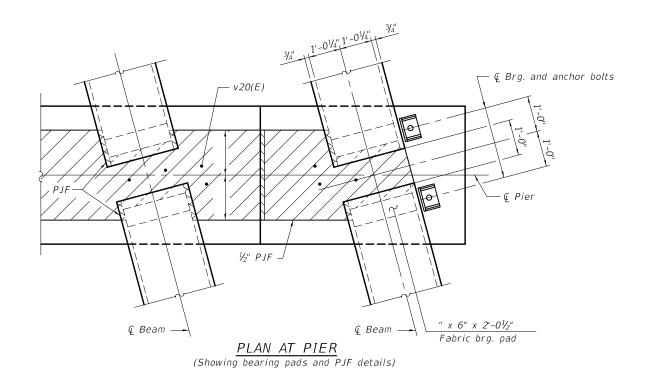


DETAIL 'A'



### SECTION A-A

(Dimensions along & of beam, except as shown)



Q 1¾" Ø hole, typ.-

#### SIDE RETAINER

(2 required each side of pier).

Notes:

Reinforcement bars in diaphragm are billed with superstructure on

Concrete in diaphragm is included with Concrete Superstructure on sheet of

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

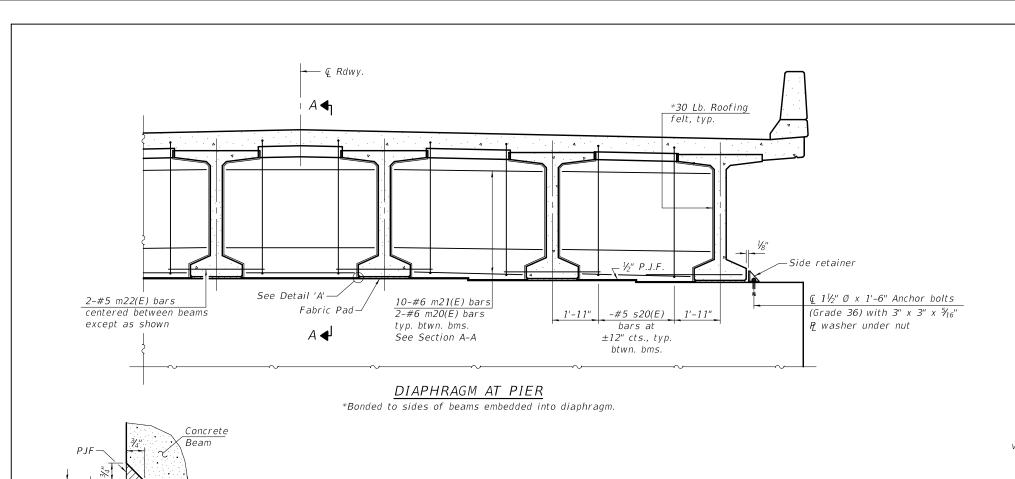
Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

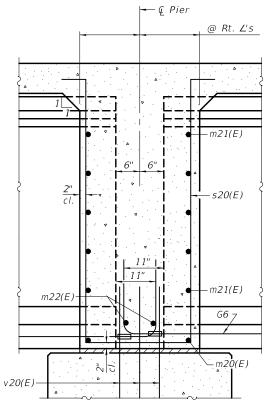
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

### DFP-BT-6372-L

2-17-2017

FILE NAME =	USER NAME =	DESIGNED -	REVISED -		DIAPHRAGM DETAILS	F.A.	SECTION	COUNTY	TOTAL S	EET
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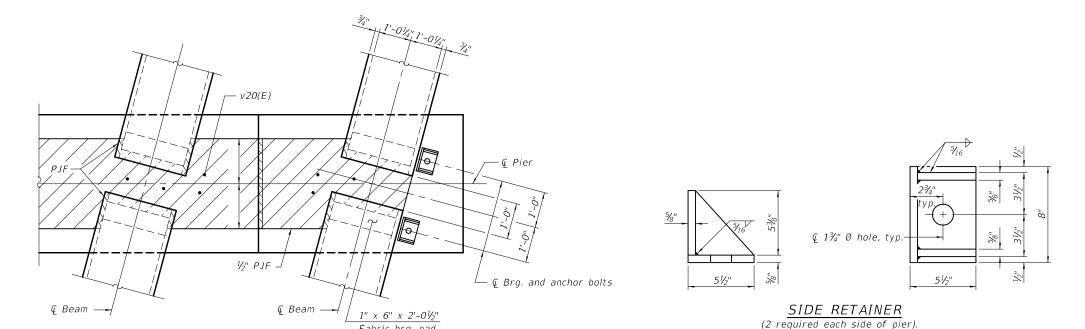


### SECTION A-A

(Dimensions along & of beam, except as shown)

### DETAIL 'A'

- Fabric brg. pad



Fabric brg. pad

Reinforcement bars in diaphragm are billed with superstructure on sheet of

Concrete in diaphragm is included with Concrete Superstructure on sheet of

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

The s20(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

#### DEP\_RT6372\_R

2 17 2017

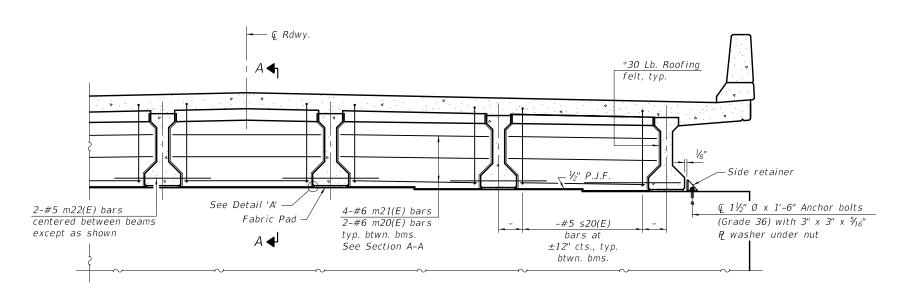
PLAN AT PIER

(Showing bearing pads and PJF details)

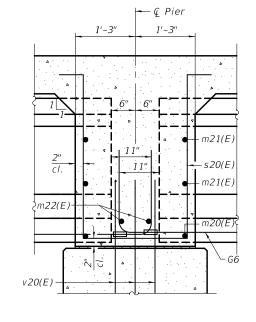
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Equivalent rolled angle with stiffeners

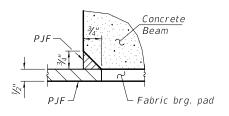
will be allowed in lieu of welded plates.



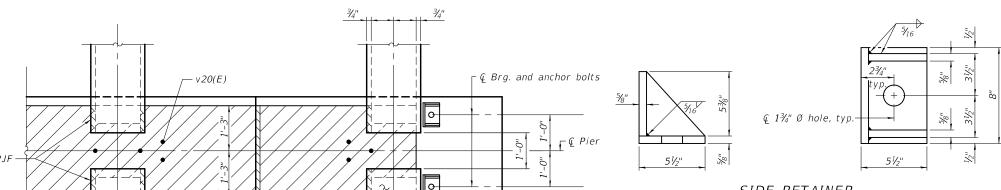
\*Bonded to sides of beams embedded into diaphragm.



### SECTION A-A



DETAIL 'A'



### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with
Concrete Structures.

For details of bar s20(E) see sheet of

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

#### DFP-13642-0

2-17-2017

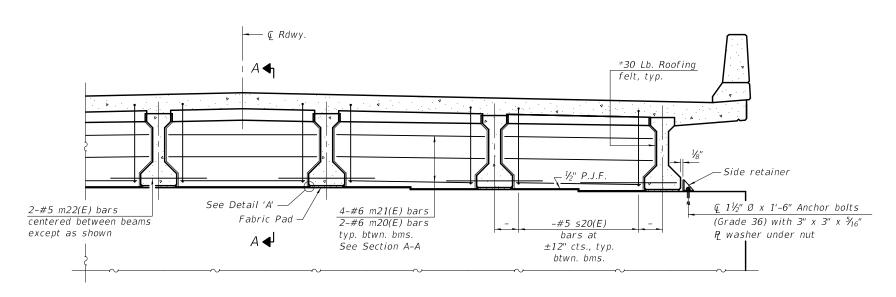
⊈ Beam

 $\frac{1}{2}$ " PJF  $\int$   $\frac{1" \times 6" \times x}{Fabric brg. pad}$ 

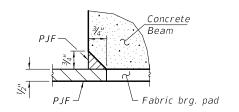
<u>PLAN AT PIER</u> (Showing bearing pads and PJF details)

⊈ Beam

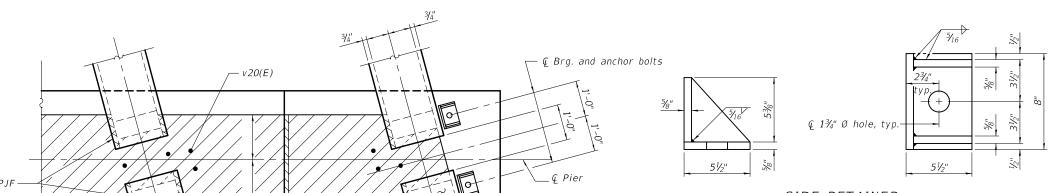
D11-13042-0	2-17-2017								
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\*Bonded to sides of beams embedded into diaphragm.



DETAIL 'A'



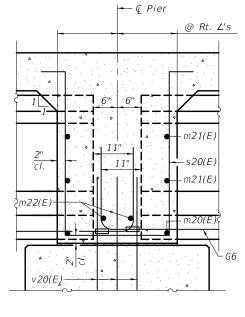
1" x 6" x

Fabric brg. pad

⊈ Beam —

### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



### SECTION A-A

(Dimensions along Q of beam except as shown)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

The s20(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### DFP-13642-L

2-17-2017

⊈ Beam —

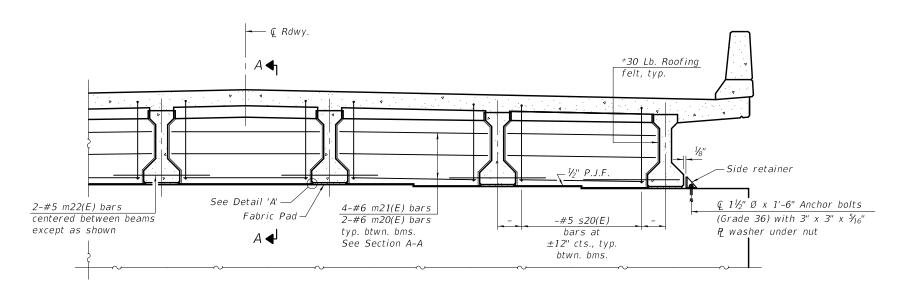
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PLAN AT PIER
(Showing bearing pads and PJF details)

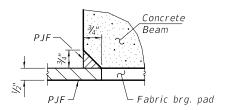
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRA <u>GM</u> DETAILS	
STRU <u>ctur</u> e no.	

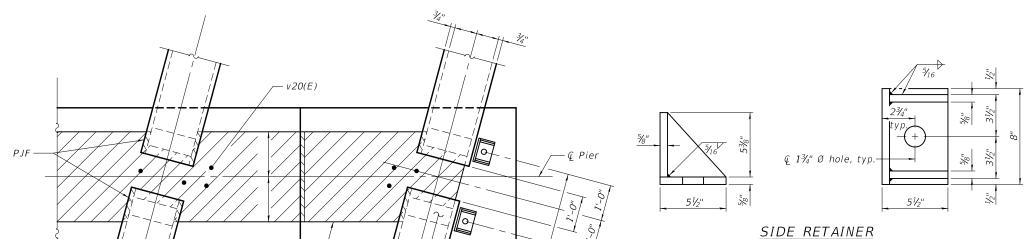
A. SECTION COUNTY TOTAL SHEETS NO CONTRACT NO.



\*Bonded to sides of beams embedded into diaphragm.



### DETAIL 'A'



Fabric brg. pad

#### Equivalent rolled angle with stiffeners ½" PJF will be allowed in lieu of welded plates. © Brg. and anchor bolts

PLAN AT PIER (Showing bearing pads and PJF details)

© Beam —→

### Notes:

v20(E)-

Reinforcement bars in diaphragm are billed with superstructure on

Concrete in diaphragm is included with Concrete Superstructure on sheet of

SECTION A-A

(Dimensions along © of beam except as shown)

<del>-</del> € Pier

@ Rt. **L**'s

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

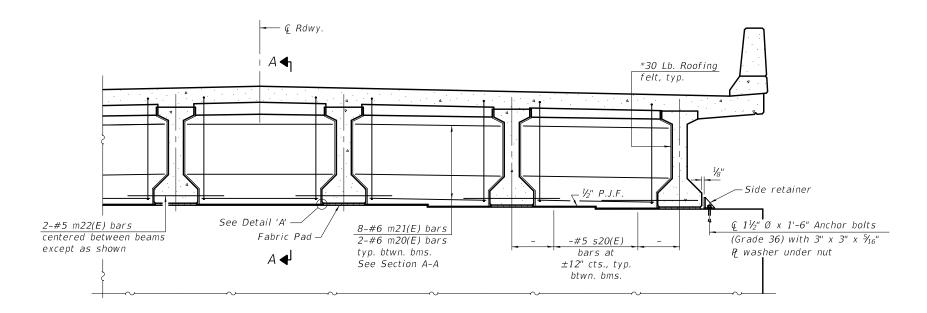
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced

until deck is poured and cured. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

#### DEP\_136/12\_R

DFF-13042-R	2-17-2017								
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	PLOT DATE =	CHECKED -	REVISED -				ILLINOIS FE	ED. AID PROJECT	

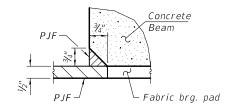
(2 required each side of pier).



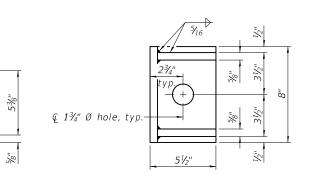
3/4" 101/4" 101/4" 3/4"

\*Bonded to sides of beams embedded into diaphragm.

- & Brg. and anchor bolts









(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

# SECTION A-A

 $\frac{2''}{cI}$ 

m22(E)

v20(E)

├<del>-</del> @ Pier

1'-3"

s20(E)

m21(E)

m20(E)

#### Notes

Reinforcement bars in diaphragm are billed with superstructure on sheet  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with
Concrete Structures.

For details of bar s20(E) see sheet of .

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

#### DFP-14854-0

2-17-2017

⊈ Beam

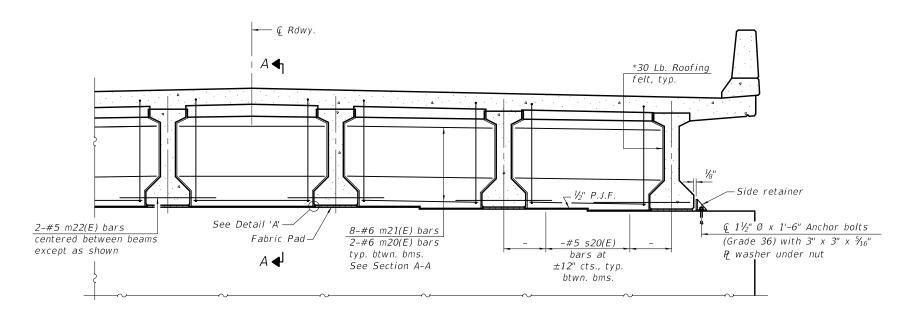
— v20(E)

½" PJF →

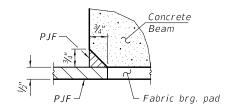
<u>PLAN AT PIER</u> (Showing bearing pads and PJF details)

 $\frac{1" \times 6" \times 1'-8\frac{1}{2}"}{Fabric brg. pad}$ 

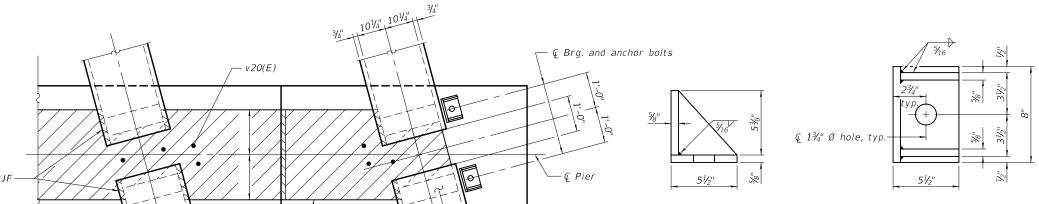
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Ī	FILE NAME =	USER NAME =	DESIGNED -	REVISED -		DIAPHRAGM DETAILS	F.A.	SECTION	COUNTY TOTAL SHEET
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		PLOT DATE =	CHECKED -	REVISED -				ILLINOIS FED. A	ID PROJECT



\*Bonded to sides of beams embedded into diaphragm.



### DETAIL 'A'



1" x 6" x 1'-8½" Fabric brg. pad

€ Beam —

### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.  $\frac{\textit{SECTION A-A}}{\textit{(Dimensions along Q of beam except as shown)}}$ 

 $\frac{2^{"}}{cI}$ 

m22(E)

v20(E)-

### Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

├─ @ Pier

@ Rt. Ľs

s20(E)

m21(E)

m20(E)

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06

of the Standard Specifications. Side retainers shall be hot dip galvanized.

Beams shall be braced for stability during erection and remain braced
until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### DFP-14854-L

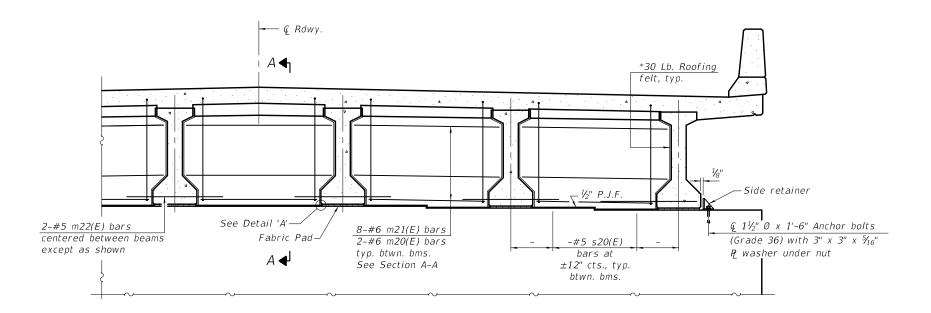
2-17-2017

€ Beam —

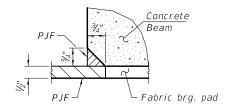
½" PJF √

PLAN AT PIER
(Showing bearing pads and PJF details)

DIT -14034-L	2-17-2017								
FILE NAME =	USER NAME =	DESIGNED -	REVISED -		DIAPHRAGM DETAILS	F.A. :	SECTION	COUNTY S	TOTAL SHEET
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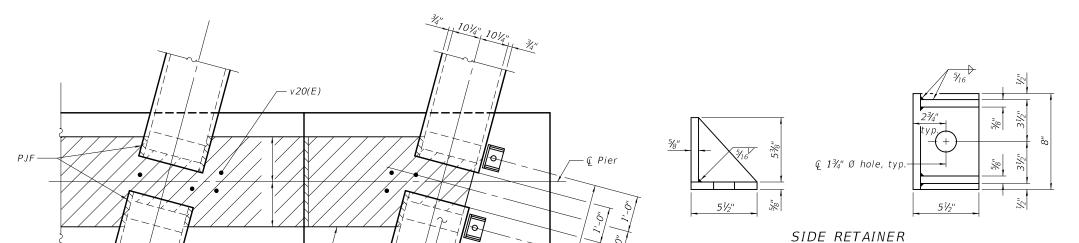


\*Bonded to sides of beams embedded into diaphragm.



### DETAIL 'A'

€ Beam —



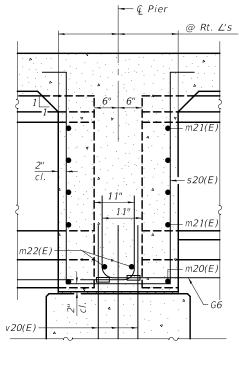
### PLAN AT PIER

(Showing bearing pads and PJF details)

½" PJF -

⊈ Beam ——

1" x 6" x 1'-8½" Fabric brg. pad



### SECTION A-A

(Dimensions along Q of beam except as shown)

Reinforcement bars in diaphragm are billed with superstructure on

Concrete in diaphragm is included with Concrete Superstructure

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced

until deck is poured and cured. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### DFP-I4854-R

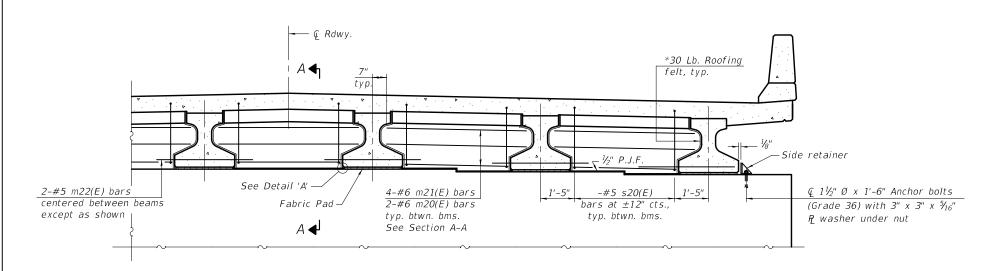
2-17-2017

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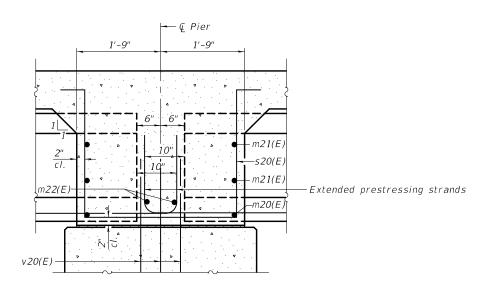
© Brg. and anchor bolts

(2 required each side of pier). Equivalent rolled angle with stiffeners

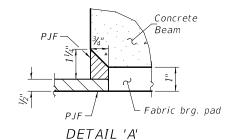
will be allowed in lieu of welded plates.

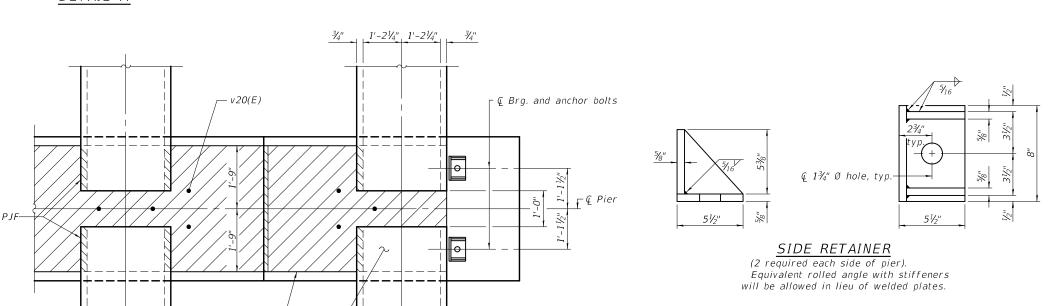


\*Bonded to sides of beams embedded into diaphragm.



### SECTION A-A





Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### PLAN AT PIER

1" x 1'-3" x 2'-4½"

Fabric brg. pad

½" PJF

(Showing bearing pads and PJF details)

⊈ Beam —

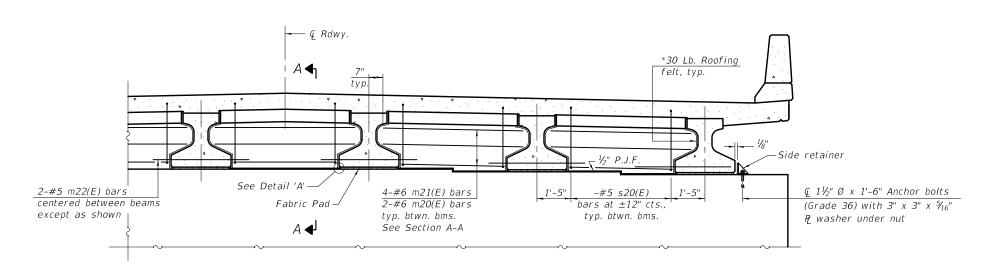
#### DFP-11 27-0

€ Beam

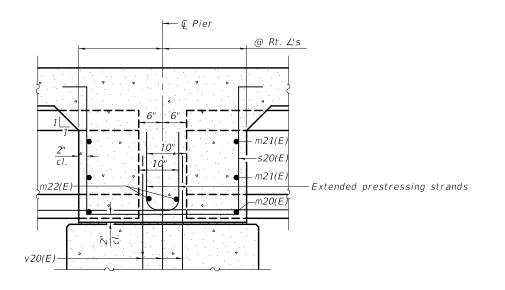
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# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

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STRUCTURE NO.				CONTRACT	NO.

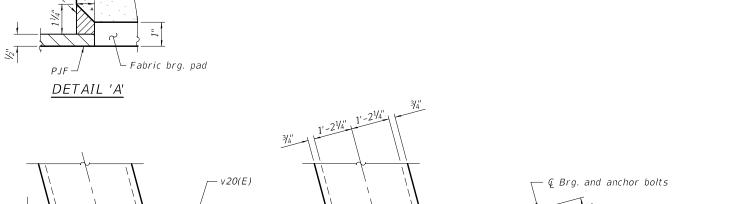


\*Bonded to sides of beams embedded into diaphragm.



### SECTION A-A

(Dimensions along Q of beam except as shown)



⊈ Beam ——

1¾" Ø hole, typ.-

### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Reinforcement bars in diaphragm are billed with superstructure on

Concrete in diaphragm is included with Concrete Superstructure

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Beams shall be braced for stability during erection and remain braced

until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### PLAN AT PIER

(Showing bearing pads and PJF details)

### DFP-IL27-L

2-17-2017

⊈ Beam ——

Concrete

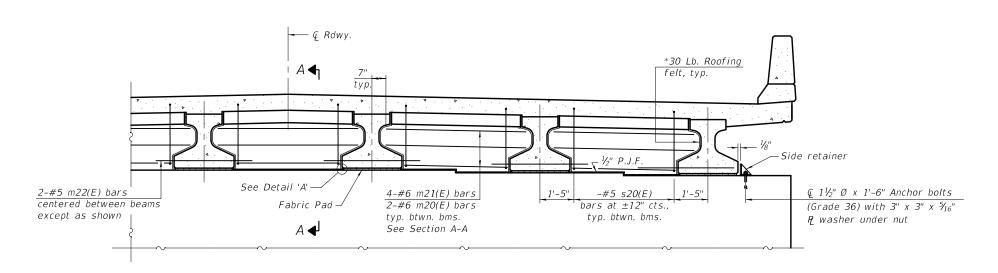
Beam

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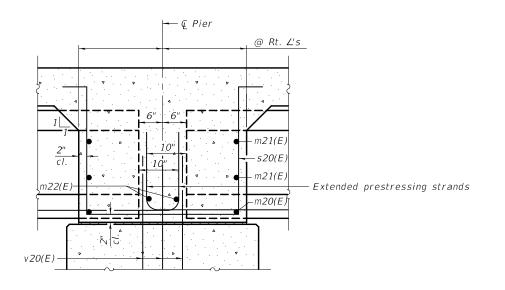
⊈ Pier

1" x 1'-3" x 2'-4½"

Fabric brg. pad

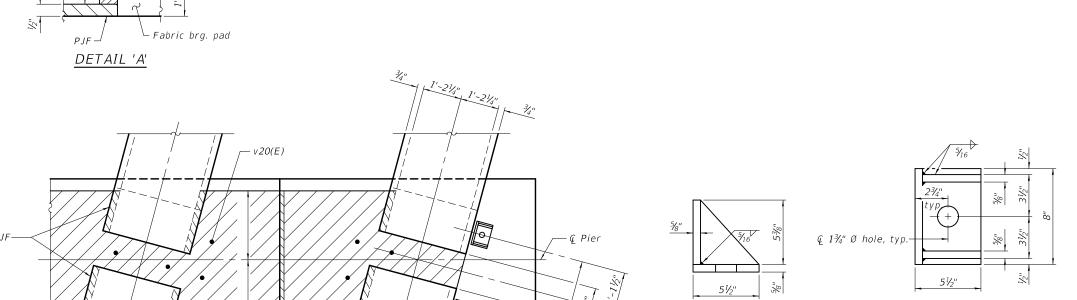


\*Bonded to sides of beams embedded into diaphragm.



### SECTION A-A

(Dimensions along Q of beam except as shown)



· & Brg. and anchor bolts

### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Notes

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06

of the Standard Specifications. Side retainers shall be hot dip galvanized.

Reams shall be braced for stability during erection and remain braced.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### PLAN AT PIER

(Showing bearing pads and PJF details)

⊈ Beam —<del>-</del>

 $1'' \times 1' - 3'' \times 2' - 4\frac{1}{2}''$ Fabric brg. pad

### DFP-IL27-R

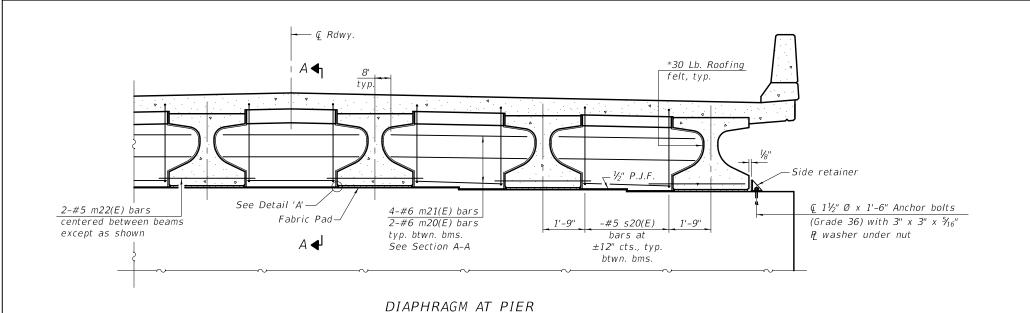
ℚ Beam →

2-17-2017

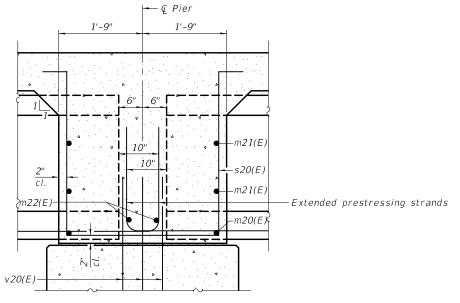
Concrete

Beam

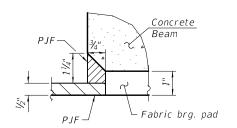
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\*Bonded to sides of beams embedded into diaphragm.

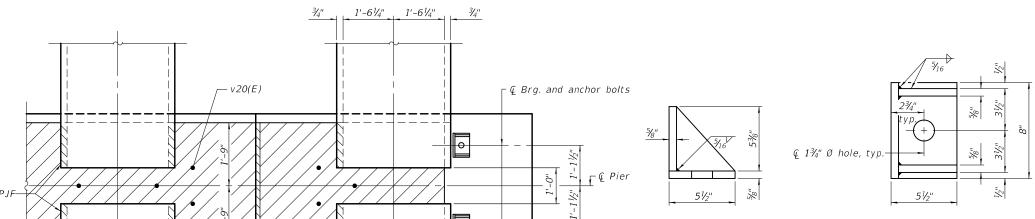


### SECTION A-A



DETAIL 'A'

⊈ Beam —



### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with
Concrete Structures.

For details of bar s20(E) see sheet of

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

#### DFP-1136-0

2-17-2017

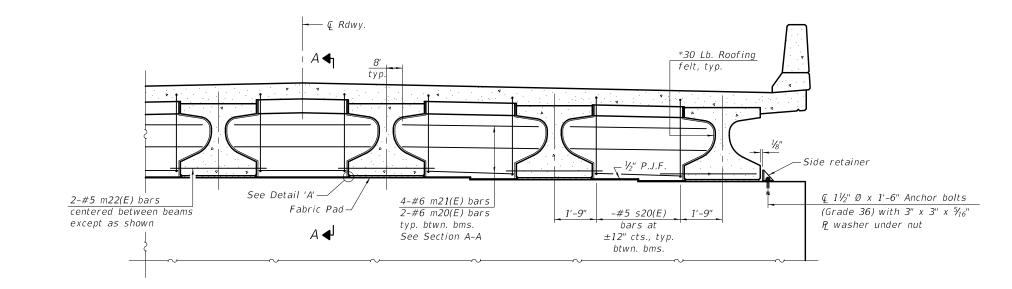
½" PJF

 $\frac{1" \times 1'-3" \times 3'-0\frac{1}{2}"}{Fabric brg. pad}$ 

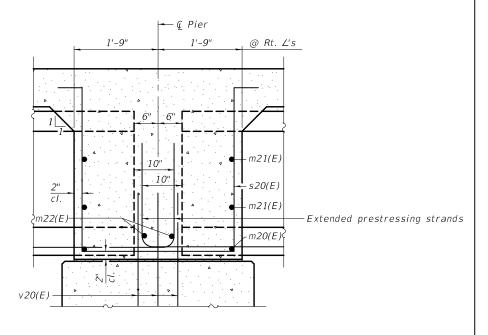
<u>PLAN AT PIER</u> (Showing bearing pads and PJF details)

⊈ Beam —

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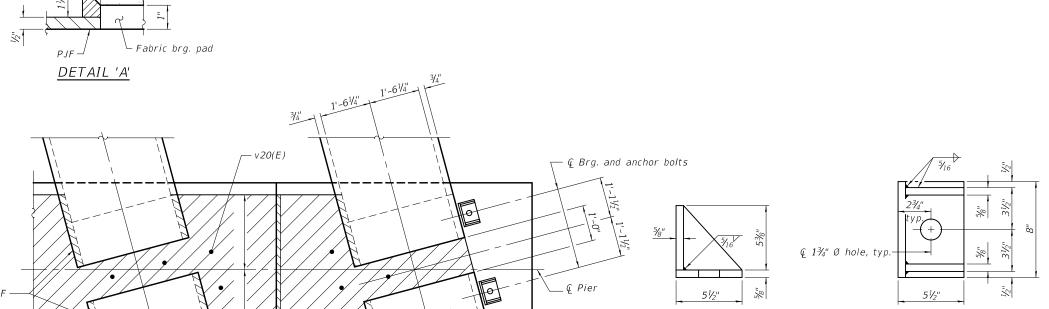


\*Bonded to sides of beams embedded into diaphragm.



### SECTION A-A

(Dimensions along Q of beam except as shown)



1" x 1'-3" x 3'-01/2"

Fabric brg. pad

⊈ Beam ——

### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Reinforcement bars in diaphragm are billed with superstructure on

Concrete in diaphragm is included with Concrete Superstructure on sheet of

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### PLAN AT PIER

(Showing bearing pads and PJF details)

½" PJF

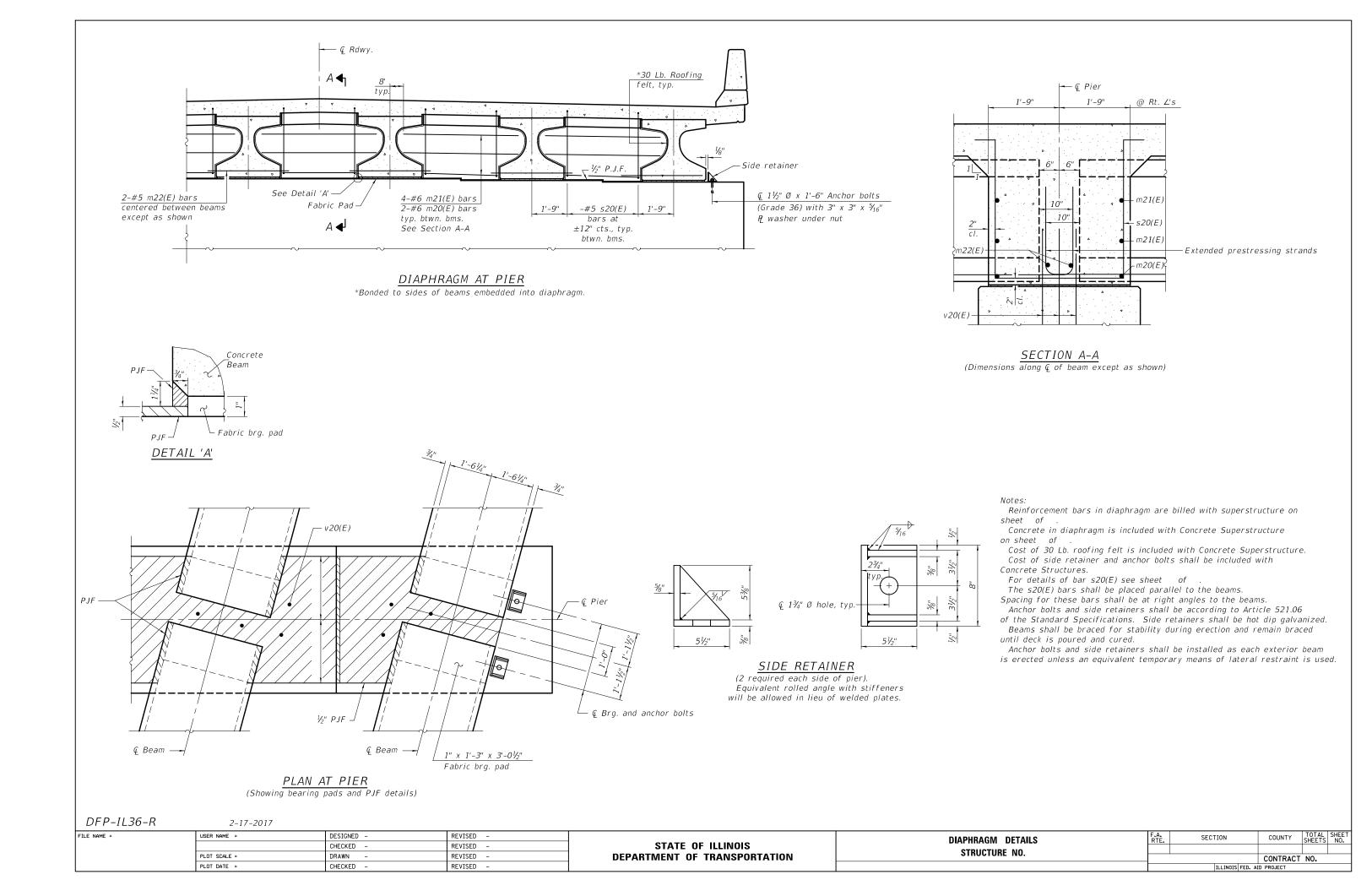
DFP-IL36-L

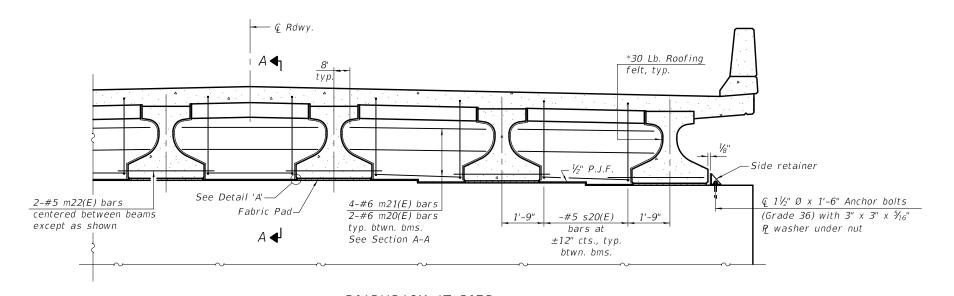
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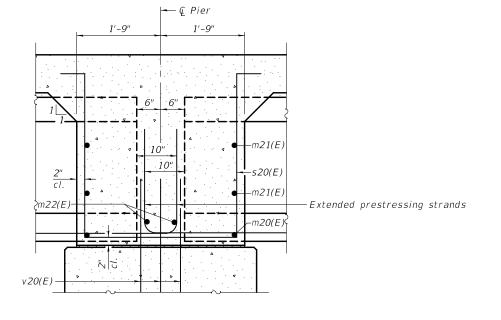
@ Beam —→

Concrete Beam

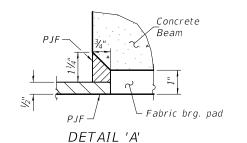
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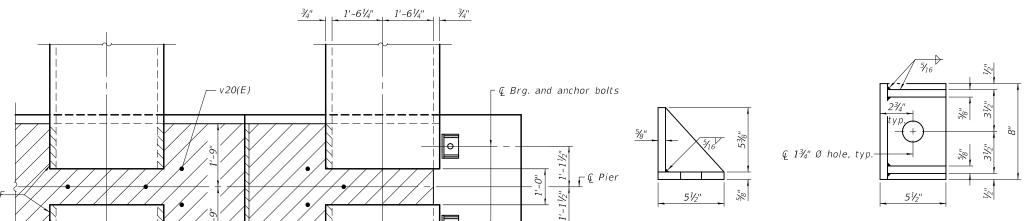






\*Bonded to sides of beams embedded into diaphragm.





### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Notes:

SECTION A-A

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with
Concrete Structures.

For details of bar s20(E) see sheet of

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

#### DFP-11 36N-0

⊈ Beam —

2-17-2017

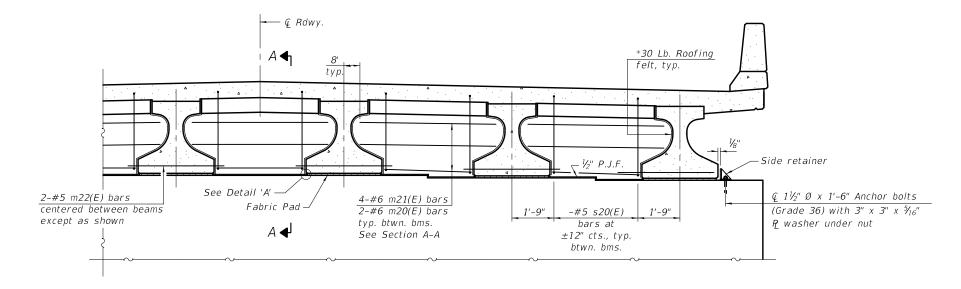
½" PJF

 $\frac{1" \times 1'-3" \times 3'-0\frac{1}{2}"}{Fabric brg. pad}$ 

<u>PLAN AT PIER</u> (Showing bearing pads and PJF details)

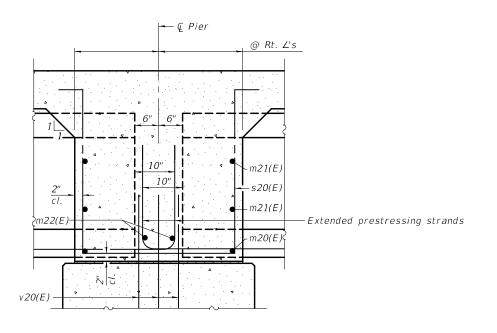
⊈ Beam —

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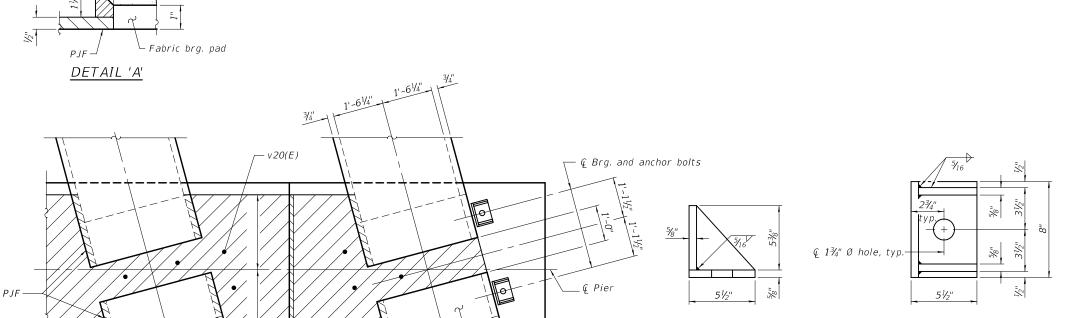
⊈ Beam ——

\*Bonded to sides of beams embedded into diaphragm.



### SECTION A-A

(Dimensions along Q of beam except as shown)



1" x 1'-3" x 3'-01/2"

Fabric brg. pad

### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Notes

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06

of the Standard Specifications. Side retainers shall be hot dip galvanized.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### PLAN AT PIER

(Showing bearing pads and PJF details)

½" PJF

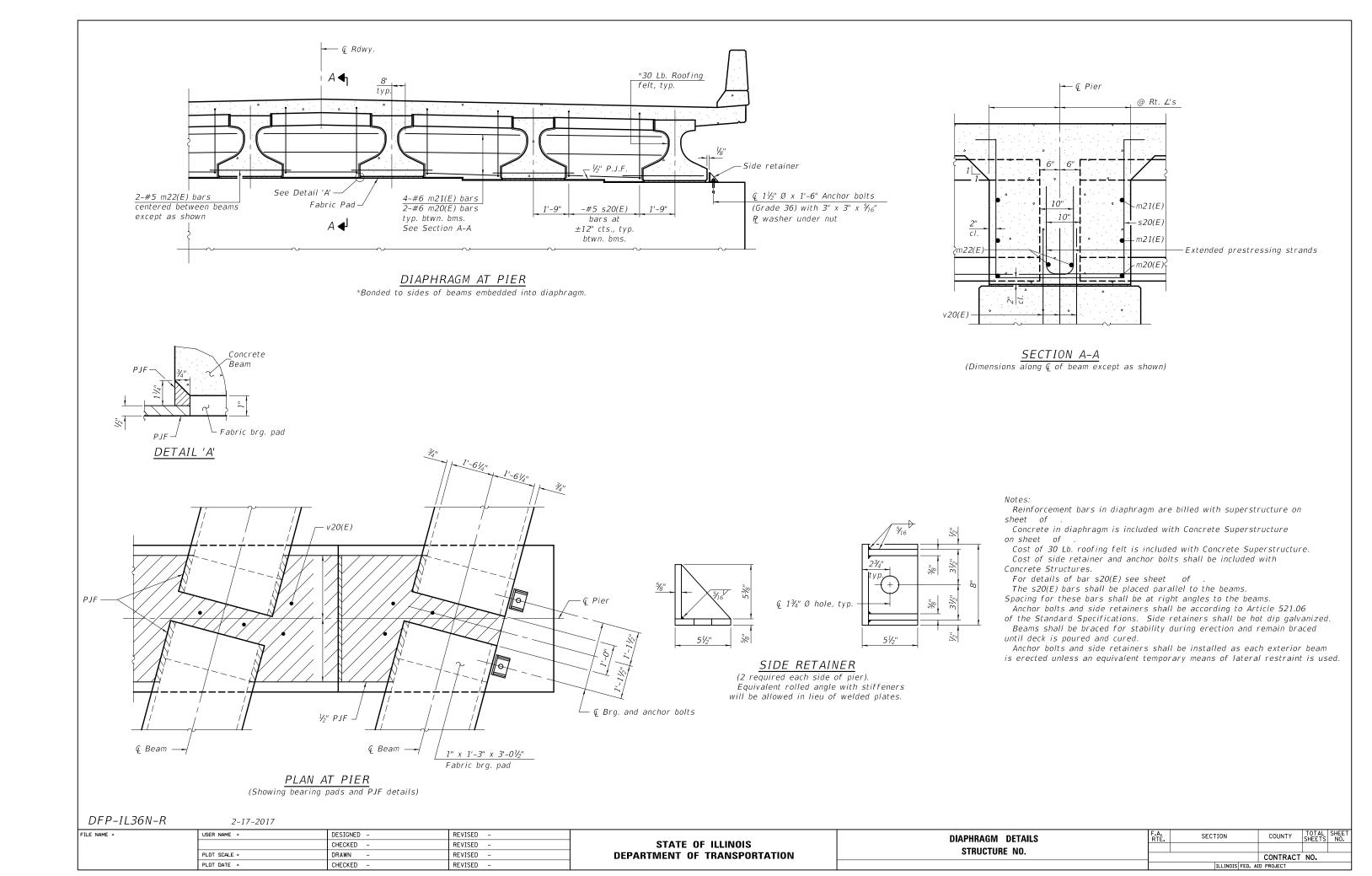
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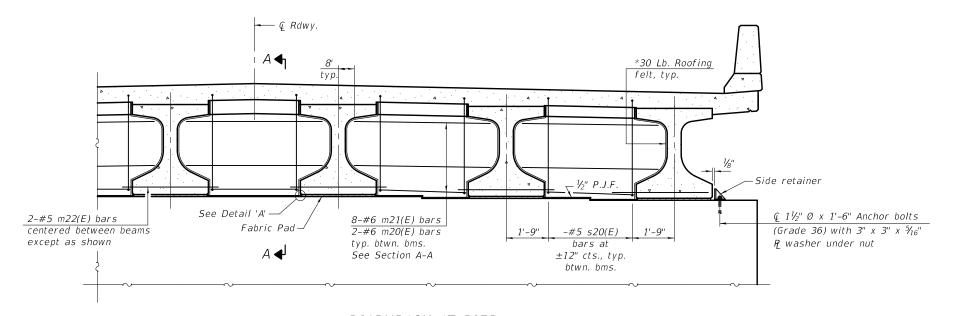
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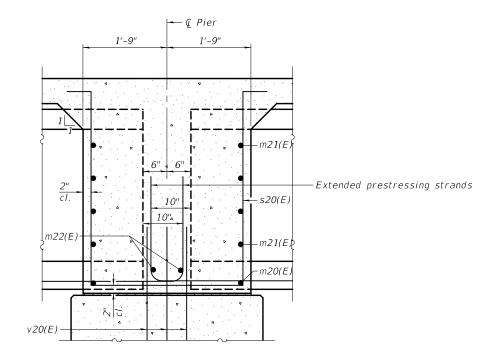
@ Beam —→

\_Concrete \_Beam

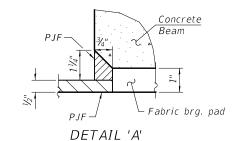
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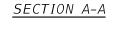


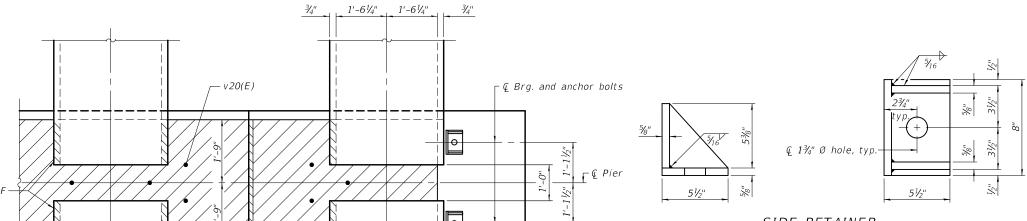




\*Bonded to sides of beams embedded into diaphragm.







#### Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet  $% \left( 1\right) =\left( 1\right) \left( 1\right)$ 

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with
Concrete Structures.

For details of bar s20(E) see sheet of .

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

### (Showing bearing pads and PJF details)

⊈ Beam -

2-17-2017

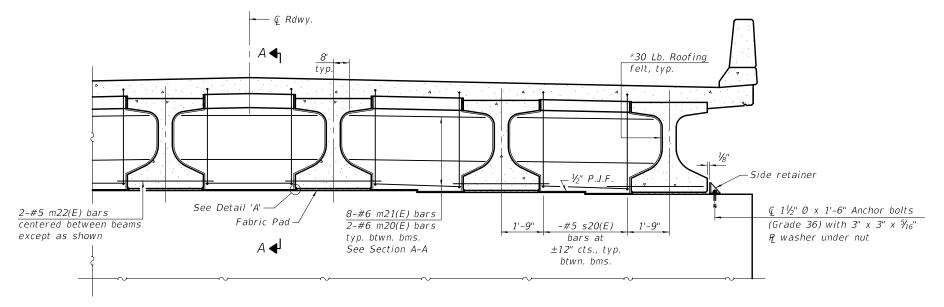
½" PJF

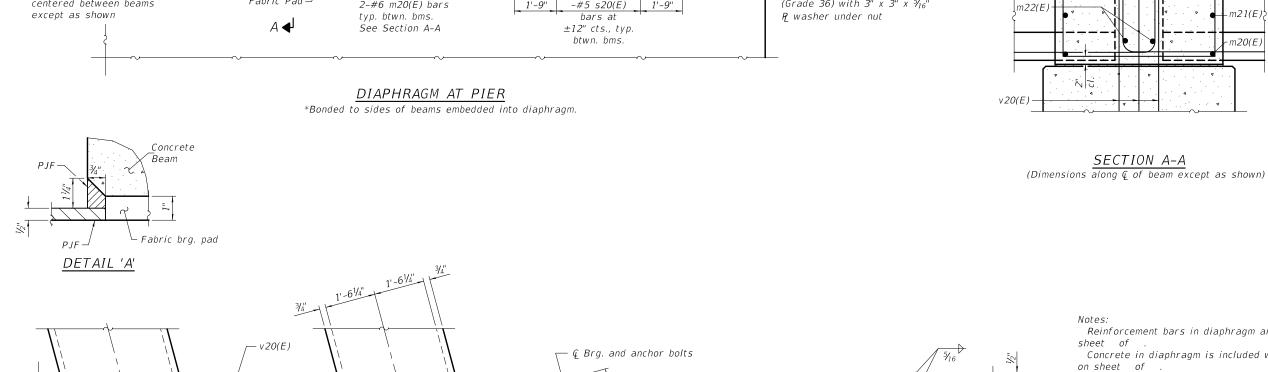
 $\frac{1" \times 1'-3" \times 3'-0\frac{1}{2}"}{Fabric brg. pad}$ 

PLAN AT PIER

⊈ Beam —

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∟ ⊊ Pier

1" x 1'-3" x 3'-01/2"

Fabric brg. pad

⊈ Beam ——

### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Reinforcement bars in diaphragm are billed with superstructure on

Concrete in diaphragm is included with Concrete Superstructure on sheet of

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

├<del>-</del> Ç Pier

 $\frac{2^{\prime\prime}}{cI.}$ 

@ Rt. L's

 $m21(E)^{\circ}$ 

520(E)

m21(E)

m20(E)

-Extended prestressing strands

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06

of the Standard Specifications. Side retainers shall be hot dip galvanized.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### PLAN AT PIER

(Showing bearing pads and PJF details)

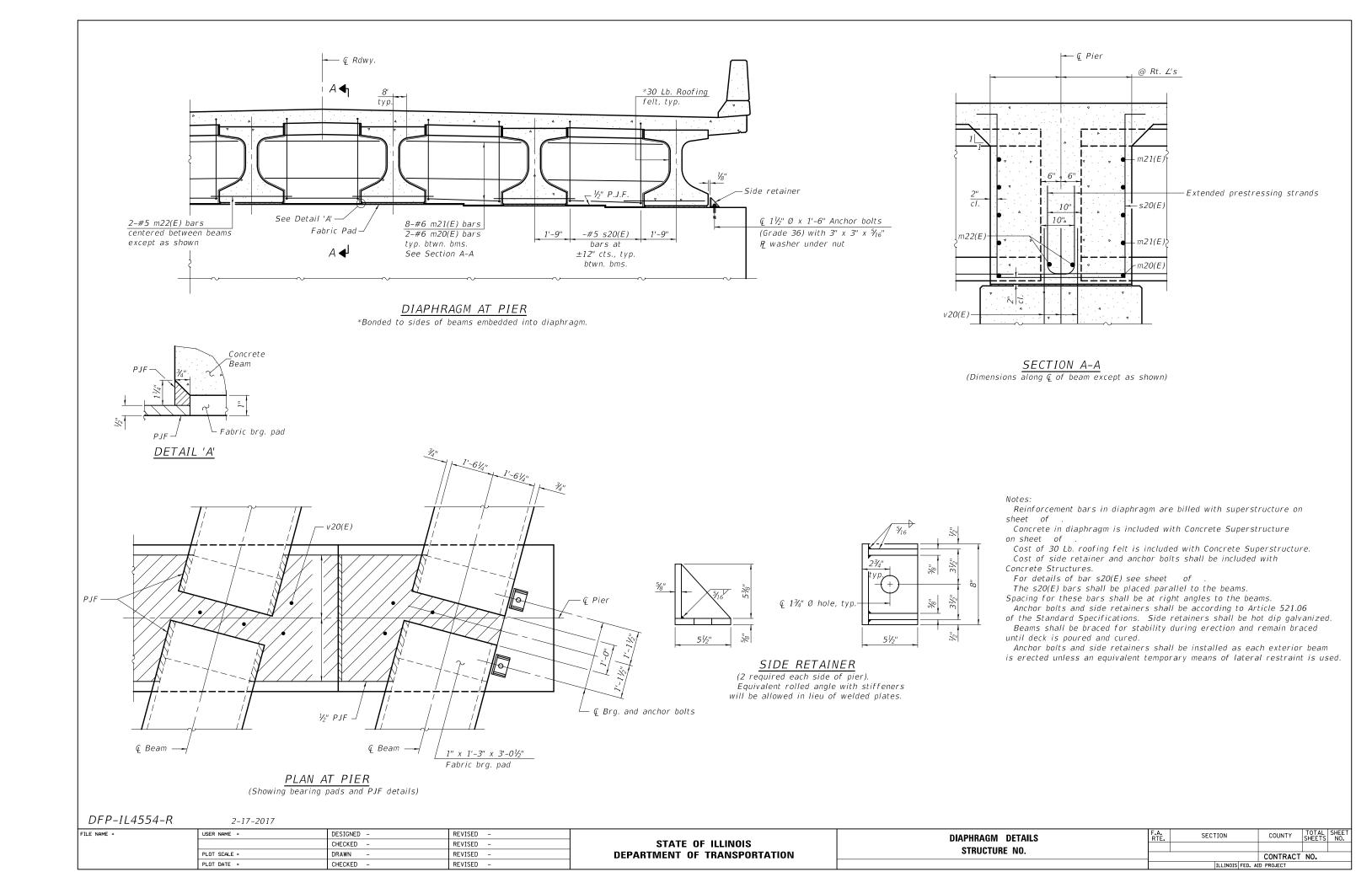
½" PJF

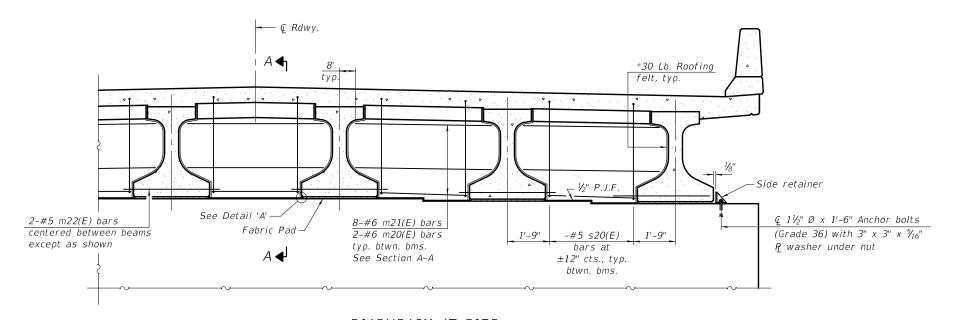
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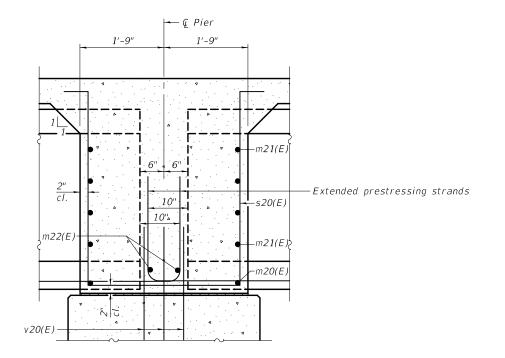
2-17-2017

@ Beam —→

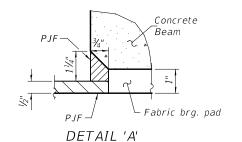
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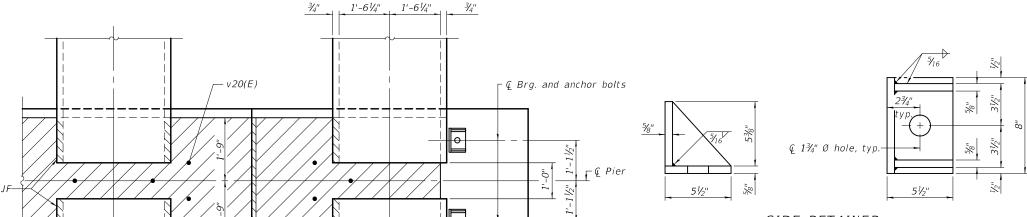




\*Bonded to sides of beams embedded into diaphragm.



## SECTION A-A



#### Note.

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet  $\quad$  of  $\quad$  .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with
Concrete Structures.

For details of bar s20(E) see sheet of

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

### <u>PLAN AT PIER</u>

½" PJF

 $\frac{1" \times 1'-3" \times 3'-0\frac{1}{2}"}{Fabric brg. pad}$ 

(Showing bearing pads and PJF details)

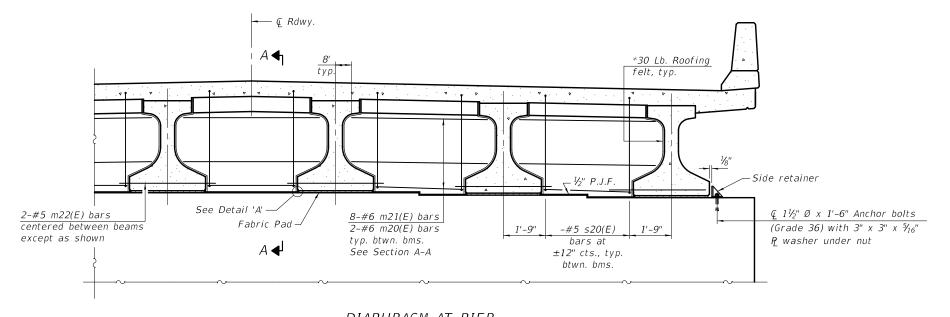
⊈ Beam —

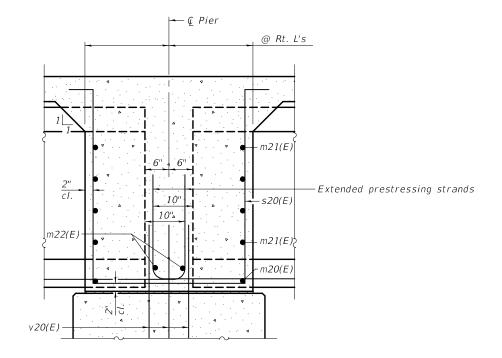
### DFP-IL4554N-0

⊈ Beam -

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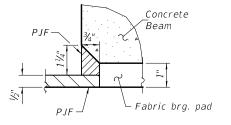




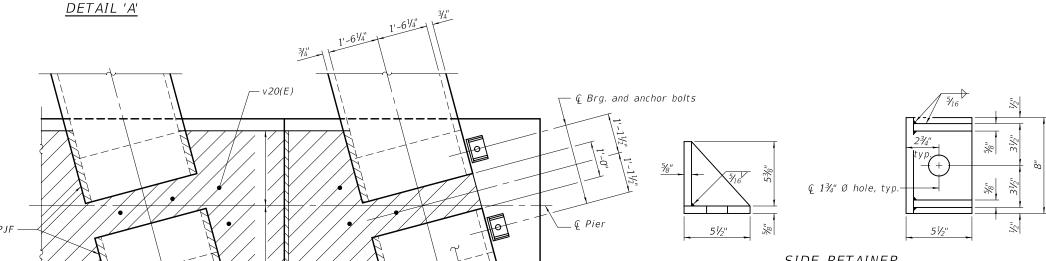
### <u>DIAPHRAGM AT PIER</u>

⊈ Beam ——

\*Bonded to sides of beams embedded into diaphragm.



# SECTION A-A (Dimensions along © of beam except as shown)



1" x 1'-3" x 3'-01/2"

Fabric brg. pad

#### Notes

Reinforcement bars in diaphragm are billed with superstructure on sheet  $% \left( 1\right) =\left( 1\right) \left( 1\right)$  of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

until deck is poured and cured.

The s20(E) bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

### PLAN AT PIER

(Showing bearing pads and PJF details)

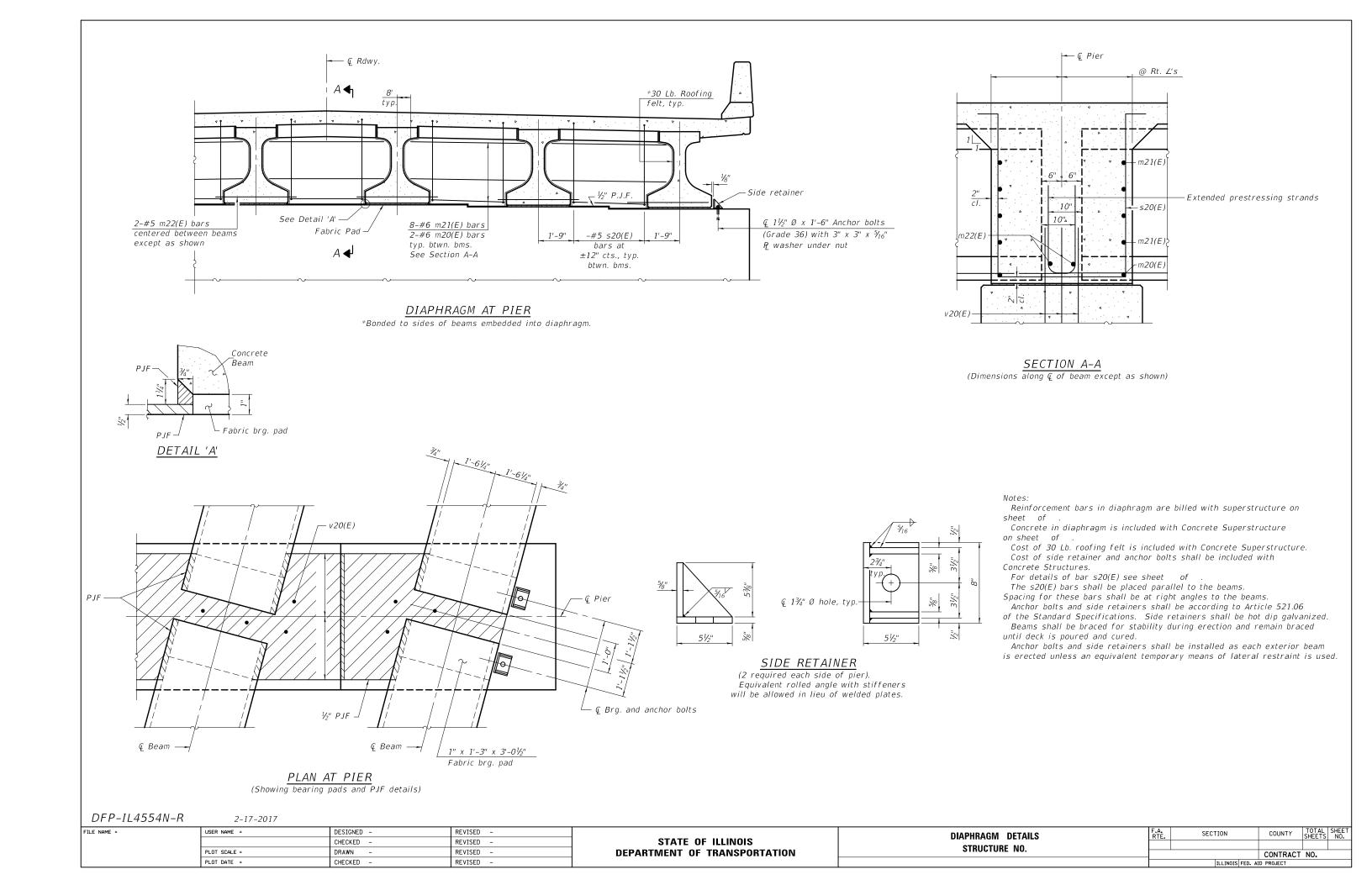
½" PJF

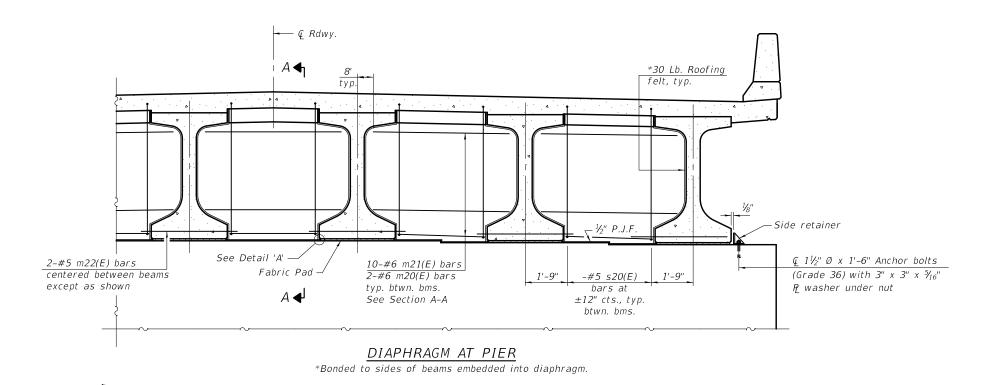
### DFP-IL4554N-L

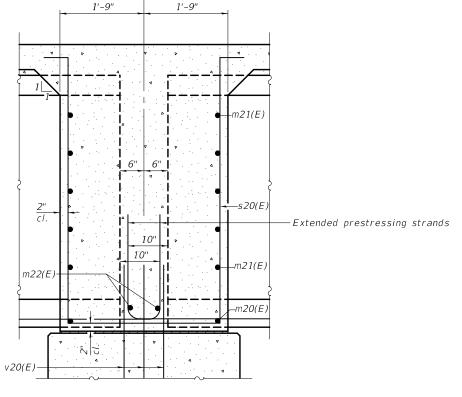
2-17-2017

@ Beam —→

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		CHECKED -	REVISED -	STATE OF ILLINOIS	LINOIS CTRUCTURE NO	11.12.			SHEETS	<u>.                                    </u>
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	PLOT DATE =	CHECKED -	REVISED -				ILLINOIS FED. AI	ID PROJECT		

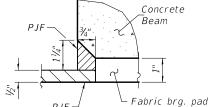




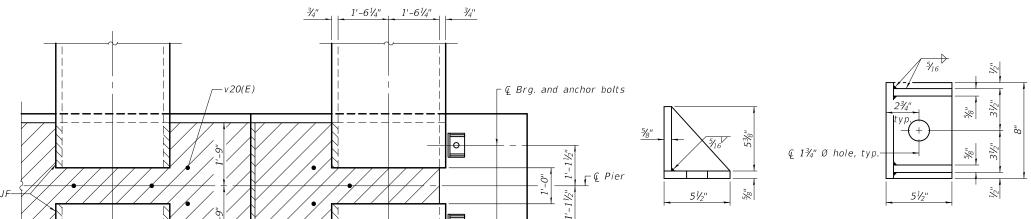


├<del>-</del> Ç Pier

SECTION A-A



DETAIL 'A'



### SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of .

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

### DFP-IL6372-0

€ Beam

2-17-2017

21, 201,				
FILE NAME =	USER NAME =	DESIGNED -	REVISED -	Π
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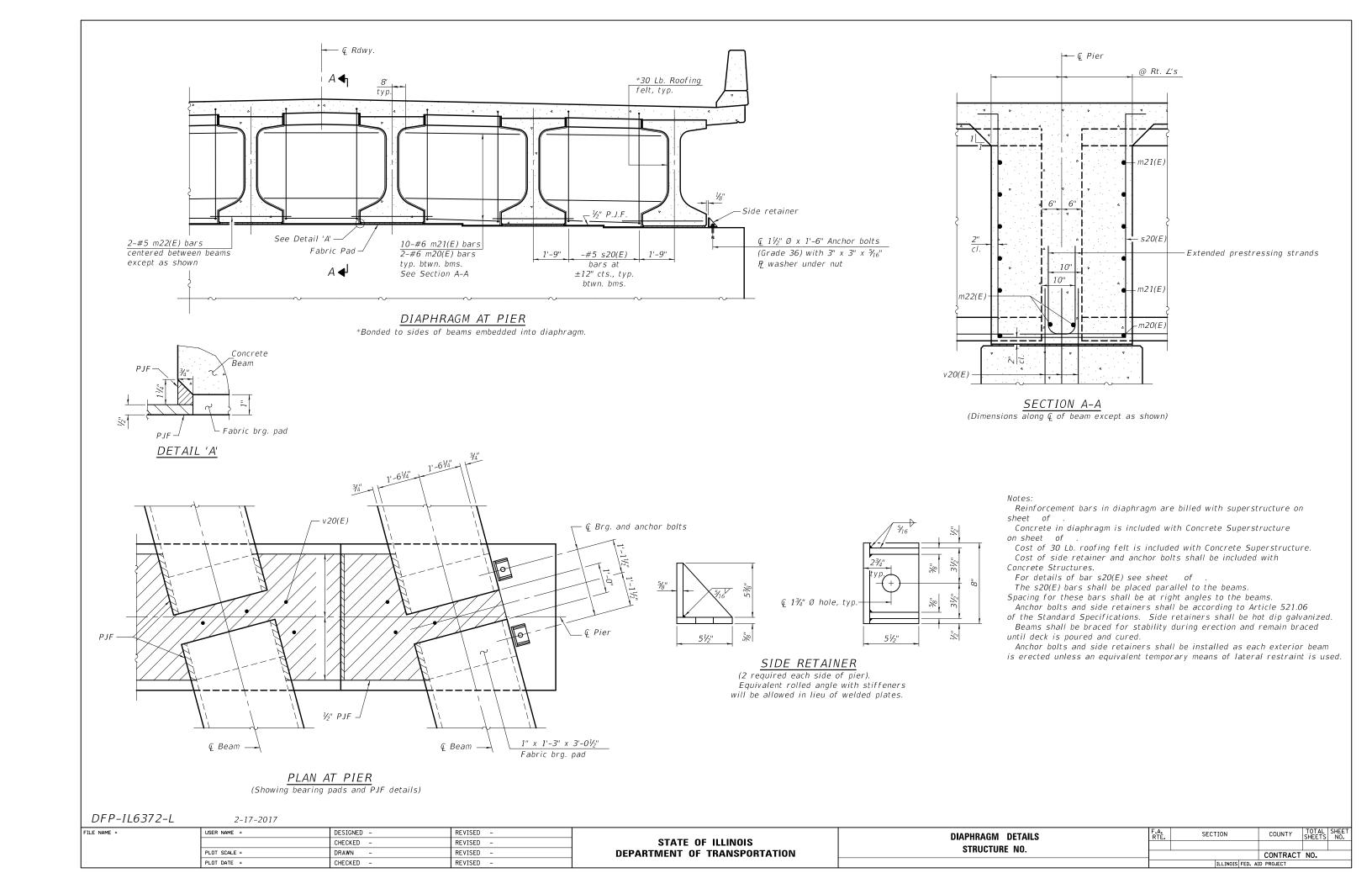
½" PJF

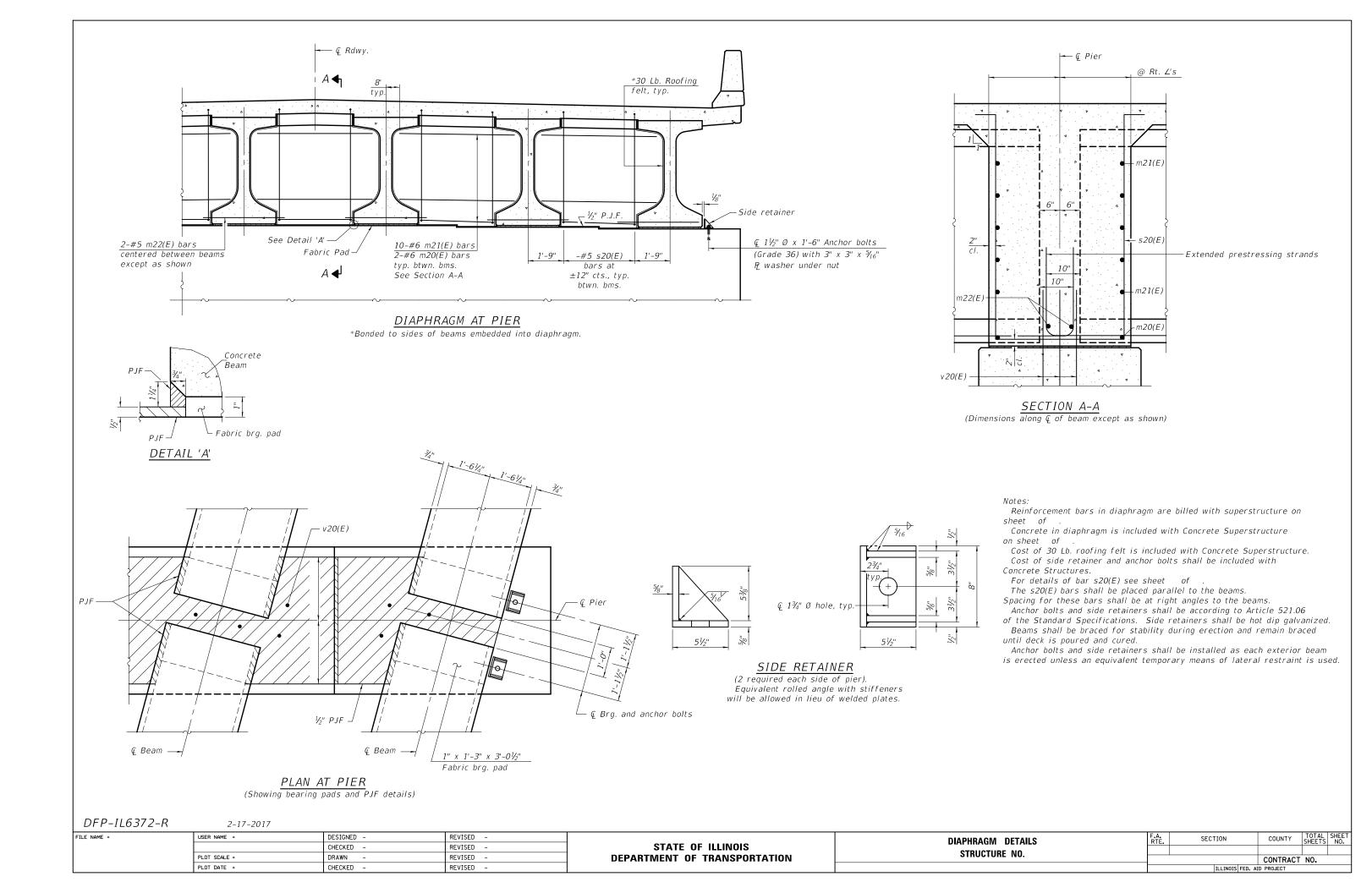
 $\frac{1" \times 1'-3" \times 3'-0\frac{1}{2}"}{Fabric\ brg.\ pad}$ 

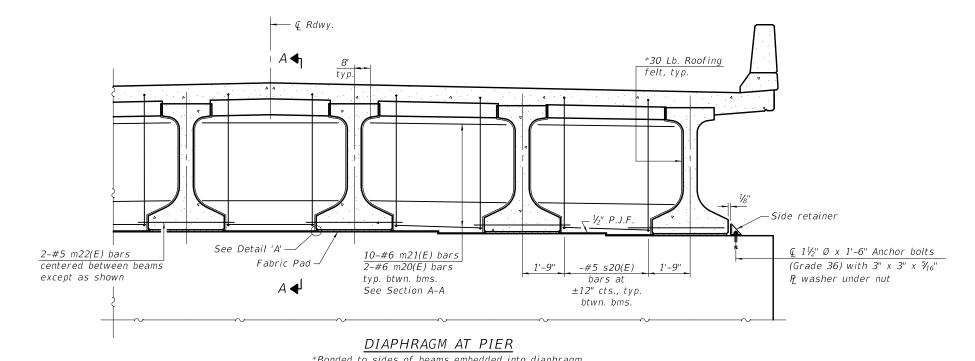
<u>PLAN AT PIER</u> (Showing bearing pads and PJF details)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

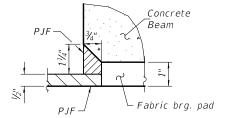
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DIAPHRAGM DETAILS	F.A. RTE.	SECTION	COUNTY	TOTA SHEET



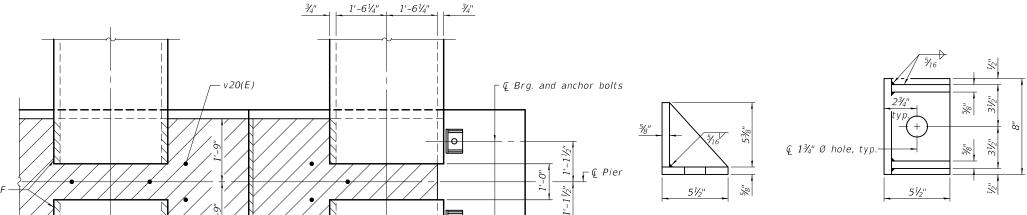




\*Bonded to sides of beams embedded into diaphragm.



DETAIL 'A'



SIDE RETAINER

(2 required each side of pier). Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:

SECTION A-A

Reinforcement bars in diaphragm are billed with superstructure on sheet of

Concrete in diaphragm is included with Concrete Superstructure on sheet of

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.

For details of bar s20(E) see sheet of

├<del>--</del> @ Pier

1'-9"

m21(E,

520(E)

m21(E)

-m20(E)

-Extended prestressing strands

1'-9"

 $\frac{2^{\prime\prime}}{cI.}$ 

m22(E)

v20(E) -

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

#### DFP-116372N-0

⊊ Beam -

½" PJF

 $1'' \times 1' - 3'' \times 3' - 0\frac{1}{2}''$ Fabric brg. pad

PLAN AT PIER (Showing bearing pads and PJF details)

⊊ Beam —

	DIT-120372N-0	2-17-2017							
	FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DIAPHRAGM DETAILS STRUCTURE NO.	F.A.	SECTION	COUNTY TOTAL SHEET
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		PLOT SCALE =	DRAWN -	REVISED -					CONTRACT NO.
		PLOT DATE =	CHECKED -	REVISED -				ILLINOIS FED. /	AID PROJECT

